Comments on the Proposed Amended Net Metering Rule (5.100):

The following parties provided comments on the proposed rule: the State of Vermont Department of Public Service ("Department"), Green Mountain Power Corporation ("GMP"), Vermont Electric Cooperative, Inc. ("VEC"), City of Burlington Electric Department ("BED"), Vermonters for a Clean Environment ("VCE"), Encore Redevelopment ("Encore"), Global Resource Options, Inc. ("GroSolar"), Leslie Cadwell PLC, the State of Vermont Agency of Natural Resources ("ANR")[1], Stellar Power, LLC ("Stellar"), and Renewable Energy Vermont ("REV"). Below we discuss the substantive comments and identify revisions to the rule made in response to these comments. Parties have also identified some typographical errors, which have been corrected, and some non-substantive edits have been made to the proposed rule.

5.102(G) Definition of Facility:

Comments

This subsection of the rule defines what constitutes a net metering facility. REV, Stellar and VCE request further clarification of the definition.

Response

The purpose of the definition is to prevent situations where a net metering customer seeks to circumvent the net metering capacity limitations by expanding an existing system and claiming it is a separate facility and, therefore, should not be counted as one system against the capacity limitations. The definition is not intended to require that truly separate systems be viewed as one facility simply because the facilities are located in close proximity. For example, two homeowners with adjoining properties could each install separate facilities to serve their respective homes. Conversely, a single customer with sufficient land resources could install more than one facility as long as each facility met the capacity limits.

5.105(A) Customer Billing Requirements

Comments

This subsection of the rule sets forth general billing information utilities should include as part of a net metering customer's bill. BED supports the provision as written. Ms. Cadwell argues that the billing requirements should be made mandatory.

Response

We have clarified that the intent of this section is that utilities should provide this type of information where it is available and feasible to do so. In many cases, depending upon the type of net metering arrangement involved, some of the information required will not be available to the utility, or applicable to a particular net metering customer. The various utilities also employ different billing systems with different capabilities making it difficult to prescribe uniform billing information standards for all utilities. Therefore, we find that allowing utilities some discretion

1. ANR has suggested several revisions to the Board's net metering application and registration forms. However, those forms are not part of the current rulemaking. The Board will take ANR's suggestions into consideration the next time it revises the forms.

in this area is appropriate. Accordingly, we have not accepted the proposed amendment to the rule.

5.105(B) Membership in Multiple Groups

Comments

This subsection of the rule limits each customer account's membership in group net metering arrangements to one group at a given time. REV argues that this provision would decrease the amount of net-metered generation installed because it would prohibit a group from adding multiple generation sources. Encore requests clarification regarding the membership of customers with multiple meters membership in multiple groups.

Response

We do not share REV's concerns regarding this section. The limitation on group membership does not preclude a group from adding multiple generation sources as part of a single group. For example, a customer could have a solar panel on its residence and be part of a group that includes a neighbor with a wind turbine. Both sources of production would be added together to calculate the total production attributable to the group. In addition, two separate groups could merge to form a single group with multiple generation sources. The sole intent of this section is to prohibit a single customer account from belonging to multiple separate groups in order to avoid costly and largely unnecessary administrative overhead associated with billing a customer account that belongs to multiple groups. Accordingly, we have not accepted the proposed amendment to the rule.

With respect to Encore's comments, pursuant to the rule, a customer account, that may include one or more meters, may be a member of only one net metering group at one time. Customers with multiple accounts may enroll each of the accounts in separate group net metering arrangements at one time. However, customers may not enroll individual meters billed under the same account in separate net metering groups.

5.105(E) Allocation of Production

Comments

This subsection of the rule provides that group net metering customers may allocate kWh credits on a percentage basis or in a manner that offsets one member's bill with any remaining credits applied to the next member's bill. The Department and VEC request clarification as to when the kWh credits are monetized.

Response

In order to further clarify this subsection the following examples may prove useful: Example 1: a group system consists of 2 residential customers each with a residential rate of $.10. The net metering system consists of a solar generator with a Production Meter at the generation source measuring total generation. The generator is connected directly to the utility grid and does not offset customer consumption. The customers have allocated generation 50% to each. In one month, the solar generator produces 150 kWh. The utility's solar incentive payment is $.06 per kWh produced.

In this example, each customer would receive a monetary credit of $7.50 ($.10 x 75 kWh) associated with generation on their respective bills. Each customer would also receive a monetary credit of $4.50 (75 kWh x .06) equal to 50% of the solar credit payment.

Example 2: a group system is comprised of 2 residential customers A and B, each with a rate of $.10, one demand customer, Customer C, with an energy rate of $.05, and one small commercial (non-demand) customer, Customer D, with a rate of $.08. The net-metering system consists of a solar generator with a Production Meter at the generation source measuring generation. The generator is connected directly to the utility grid and does not offset customer consumption. The customers have allocated generation 25% to each. In one month, the solar generator produces 180 kWh. The utility's solar incentive payment is $.06 per kWh produced.

In this example, Customers A, B, and C would each receive a monetary credit of $4.50 (45 kWh x $.10) on their respective bills. Customer D would receive a monetary credit of $3.60 (45 kWh x $.08). Each customer would also receive an additional monetary credit of $2.70 (45 kWh x .06) equal to 25% of the solar credit payment.

Example 3: a group system is comprised of 2 residential customers (Customers A and B) each with a residential rate of $.10. The net metering system consists of a wind turbine generator physically connected to the Billing Meter of Customer A. The customers have allocated generation 50% to each. In one month, Customer A's Billing Meter registers a negative 50 kWh.

In this example, each customer would receive a monetary credit of $2.50 (25 kWh x .10) on their respective bills.

Example 4: a group system is comprised of 2 residential customers (Customers A and B) each with a residential rate of $.10. The net metering system consists of a solar generator physically connected to the Billing Meter of Customer A. The customers have allocated net production 50% to each. The customers have elected to install a Production Meter to measure production and participate in the utility's solar credit program. The utility's solar credit payment is $.06 per kWh produced. In one month, the Production Meter registers 100 kWh of production and Customer A's Billing Meter registers a negative 50 kWh.

In this example, each customer would receive a monetary credit of $2.50 (25 kWh x .10) on their respective bills. Each customer would also receive a monetary credit of $3.00 (50 kWh x .06) equal to 50% of the solar credit payment.

Example 5: a group system is comprised of one residential customer (Customer A) with a residential rate of $.10, and one demand customer (Customer B) with an energy rate of $.05. The net metering system consists of a solar generator physically connected to the Billing Meter of Customer B. The customers have allocated net production 50% to each. The customers have elected to install a Production Meter to measure production and participate in the utility's solar credit program. The utility's solar credit payment is $.06 per kWh produced. In one month, the

Production Meter registers 400 kWh of production and Customer A's Billing Meter registers consumption of 1000 kWh.

In this example, there is no net generation to be allocated. Each customer would receive a monetary credit of $12.00 (200 kWh x $.06) equal to 50% of the solar credit payment.

Example 6: a group system is comprised of 2 residential customers (Customers A and B) each with a residential rate of $.10, one small commercial customer (Customer C) with a rate of $.08, and a TOU customer (Customer D) with a peak rate of $.15 and an off-peak rate of $.07. The net metering system consists of a solar generator physically connected to the Billing Meter of Customer A. The customers have allocated net production 25% to each. The customers have elected to install a Production Meter to measure production and participate in the utility's solar credit program. The utility's solar incentive payment is $.06 per kWh produced. In one month, the Production Meter registers 100 kWh of production. Customer A's Billing Meter registers a negative 50 kWh, and Customer D's meter registers consumption of 120 kWh peak and 80 kWh off-peak.

In this example, Customers A and B would receive a monetary credit of $1.25 (12.5 kWh x $.10), Customer C would receive a monetary credit of $1.00 (12.5 kWh x .08), Customer D would receive a monetary credit of $1.48 ((12.5 kWh x 60% x $.15) + (12.5 kWh x 40% x $.07)). Each customer would also receive a monetary credit of $1.50 (25 kWh x $.06) equal to 25% of the solar credit payment.

Example 7: a group system consists of 2 residential customers each with a residential rate of $.10. The net metering system consists of a solar generator with a Production Meter at the generation source measuring total generation. The generator is connected directly to the utility grid and does not offset customer consumption. The customers have elected to offset the bill of Customer A first with any remaining credit applied to Customer B's bill. In one month, the solar generator produces 500 kWh. The utility's solar incentive payment is $.06 per kWh produced. Customer A's bill for the month is $50.00 and Customer B's bill for the month is $50.00.

In this example, the total credit due to the group would be $80 ((500 kWh x $.10) + (500 kWh x $.06). Customer A's bill would be reduced to zero ($50.00 - $50.00) and Customer B's bill would be reduced to $20.00 ($50.00 - $30.00).

As shown in these examples, the group allocates the net or total kWh produced by the net metering system pursuant to the allocation methodology set forth by the group, these kWh are then multiplied by the member's underlying rate resulting in a monetary credit that is then applied to the member's bill.

5.106(B) Notice of Group System Member Changes

Comments

This subsection of the rule requires group net metering customers to notify the serving utility of any changes to the group, such as a change in member composition or production allocation, in writing. Stellar requests that the Board clarify that the group is not also required to notify the Board of such changes.

Response

We hereby clarify that the notice required by this subsection is required to be sent to the serving utility only.

5.106(C) Group System Billing

Comments

This subsection of the rule requires the serving utility to bill directly and send all communications related to billing, payment, and disconnection directly to each individual group member. REV argues that, in addition to the individual bills to group members, utilities should be required to issue a single aggregate bill to the contact person listed by the group as this will reduce billing complexity for the group.

Response

We do not see how this additional requirement will lessen billing complexity for individual group members. Each group member is billed each month using the system allocation percentage established by the group. If a group member feels that the allocation is incorrect, the group member needs to contact the group administrator to rectify that error. Requiring an additional aggregate bill would not change this group dynamic. In addition, this requirement would add cost and complexity to the utility's administration of group system billing. Further, this requirement would likely raise issues with respect to the privacy of customer billing information. Therefore, we have not accepted the proposed amendment to the rule.

5.107(B) Tariffs

Comments

This subsection requires that utility tariffs comply with the rule and statutory requirements regarding net metering. Ms. Cadwell argues that utilities should be required to review and amend their tariffs on an annual basis.

Response

Utilities are currently required to amend their tariffs in response to statutory or rule revisions. Once the rule is adopted, utilities will be required to file amended tariffs with the Board in order to comply with the rule. Therefore, we see no reason to compel utilities to review and amend their tariffs on an annual basis. Accordingly, we have not accepted the proposed amendment to the rule.

5.110(B) Net Metering Application Form

Comments

This subsection of the rule allows net metering systems up to 150 kW in capacity to utilize the Board's simplified application form when applying for Board approval of a net

metering system. REV maintains that systems up to 250 kW should be allowed to use the application form.

Response

The Board in adopting the simplified application form concluded that systems up to 150 kW in capacity would have limited impacts on environmental and other applicable review criteria given the relatively small size of these projects. Accordingly, the application form does not require the applicant to supply detailed information regarding these impacts. In the case of larger systems, the Board concludes that it is necessary to obtain more detailed information regarding the project in order to make an informed decision. To this end, the Board has developed a simplified application process for larger systems, included at section 5.110(C) of the rule, that is intended to clarify the application process for larger systems. Accordingly, we have not accepted the proposed amendment to the rule.

5.110(C) Petitions for Systems Greater Than 150 kW in Capacity

Comments

This subsection sets forth the filing requirements for systems greater than 150 kW in capacity. ANR requests that the site plans submitted with the applications include the location of all sensitive natural resources that are impacted directly or indirectly and the acreage of disturbed land. ANR also requests clarification as to when the 21-day comment period begins on these petitions. Ms. Cadwell argues that with respect to systems that are installed on or in an existing or new structure pursuant to subsection 5.108(A), the rule should recognize the conditional waiver of criteria that applies to these systems.

Response

We conclude that the additional information requested by ANR as part of the petition would be helpful in making an informed determination regarding a proposed project and have, therefore, revised the rule accordingly. With respect to the 21-day comment period, any entity receiving a copy of the application has 21 calendar days to file comments on the proposed project with the Board. If the Board finds that a project is incomplete, the applicant may be required to resubmit a revised application to the Board and other required entities providing for an additional comment period. In addition, an entity that has received a copy of the petition may file a motion with the Board to extend the comment period if necessary. With respect to systems installed on or in an existing or new structure pursuant to subsection 5.108(A), these systems are required by the rule to address only the criteria that have not been conditionally waived for that system.

5.111 Liability Insurance

Comments

This section of the rule requires net metering customers to maintain a liability insurance policy with a minimum general liability of $100,000 for residential systems and $300,000 for non-residential sites. The Department and REV argue that this requirement adds unnecessary costs to net metering systems and, thus, should be removed from the application form.

Response

We agree that this requirement is no longer necessary and, therefore, we have revised the rule accordingly.

Complaint Process

Comments

VCE requests that the rule be amended to provide a clear process regarding complaints or compliance issues with respect to operating systems.

Response

We have clarified the rule to reflect that in cases where a system is not operating in compliance with the conditions of approval contained in its Certificate of Public Good ("CPG"), the Board has the authority to issue fines and penalties or revoke the CPG. If an individual can demonstrate that a system in not operating in compliance with its CPG, they may petition the Board and/or the Department to take appropriate action with regard to that system. Accordingly, we decline to amend the rule.

System Capacity

Comments

In order to calculate the AC capacity of a photovoltaic system both the net metering registration form and the application form use a conversion factor of 95% of the system's DC capacity. For example, if a system had DC nameplate capacity of 100 kW, the capacity in AC would be 95 kW (100 x 95%). The 5% de-rate factor was developed as part of Docket No. 6181[2] as a method to account for power loss associated with the conversion from DC to AC power through an inverter.

Encore, the Department, REV, and GroSolar argue that the capacity of a system should be determined by using the output rating of the inverter used for that system rather than the capacity of the system. The commenters maintain that recent legislative changes made to 30 V.S.A. § 8002(15) were intended to apply to net metering projects under § 219a.

Response

The Board concludes that the changes to § 8002 do not necessitate changes to the conversion methodology used for projects under § 219a. Pursuant to Chapter 89 of 30 V.S.A. § 8002:

> For purposes of this chapter: . . .
> (15) "Plant capacity" means the rated electrical nameplate for a plant, except that, in the case of a solar energy plant the term shall mean the aggregate AC nameplate capacity of all inverters used to convert the plant's output to AC power.

This section clearly indicates that the definitions set forth therein, including the definition of plant capacity, apply to Chapter 89 only. This subsection does not contain a cross reference to § 219a, which is in Chapter 5, nor does § 219a contain a cross reference to § 8002(15). Therefore, a plain reading of the statutory language does not demonstrate any legislative intent that the definition of capacity in § 8002(15) should apply to projects under § 219a.

Further, this type of change to the definition of capacity would have significant impacts on many aspects of the net metering program. For example, the simplified registration form

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2. *Investigation into the Use of A Net Metering System for the Purchase and Sale of Electricity from Small Electrical Generating Systems to and from Electric Companies,* Docket No. 6181, Order of April 21, 1999.

process is currently available to projects with a nameplate capacity of 10 kW or less which serves to limit the footprint of these smaller systems. Using the inverter output limit in place of capacity for these projects would effectively remove the limitation on the physical size of the projects that could use the simplified registration process. This type of change could also impact each utility's progress toward the 4% cumulative capacity limit under § 219a(h)(1)(A). Currently, utilities calculate their progress toward the cap by using the nameplate capacity of the project as approved by the Board. If the Board were to change its methodology for calculating system capacity, it is unclear how this would impact the calculation of each utility's progress towards the 4% cap. Given that there is no statutory requirement to change the definition, and the potential for significant impacts for the net metering program, the Board is reluctant to make this type of broad revision without further guidance from the legislature. Accordingly, we have not accepted the proposed amendment to the rule.

Statutory Reference

Comments

REV argues that the rule, in place of using specific numerical values to denote capacity limits and other values, should simply reference the statute in order to avoid having to amend the rule in the case of future statutory changes to these values.

Response

We conclude that providing statutory references in the rule would result in a rule that is much less useful as a means of determining the specific requirements involved in net metering. In addition, using statutory references in place of actual numerical values would likely lead to misinterpretations of the rule. Therefore, we have not accepted the proposed amendment to the rule.